The implementation of e-government in Indonesia
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ABSTRACT
This conceptual paper’s objectives describe how the utilization of technology and information systems in government institutions developing e-government can improve public service performance and quality. The development of information and technology helps humans and the organization to successfully their operation. The operational system more accurate, useful, and efficient. Most governmental bodies have a low-performance rate in matters of bureaucracy. To repair the quality of bureaucratic performance in government institutions, there is a need to introduce public transparency and accountability to increase the role of public control. The usage of modern technology and systems in government is known as e-government.

Introduction
Technology advancement and computerized systems have done a great deal to help humans achieve their goals (Hidayah, 2018). The needs of production are now met quicker, more reliably, and virtually by technical advances. The same goes for information technology (IT). This is real, IT is now being used for data collection, manipulation, serving, and use. Owing to new technology and IS (Information System), decisions at an enterprise are now quicker and more reliably completed (Choi et al., 2018; DeSanctis & Poole, 1994; Hidayah, 2018; Multama et al., 2019; Sulehat & Taib, 2016). The implementation of electronic government (e-Government) in Indonesia and what has been accomplished so far undoubtedly need change on both sides in terms of the implementation plan and the philosophy of e-Government. The delay in E-Government progress would only ensure that this country is far from changing the values, enhancing the standard of public services for all, and eventually preventing societal welfare (Alshehri & Drew, 2010; Farida et al., 2020; Baeuo et al., 2016).

Citizens’ involvement has become a vital governance norm in our time. It can improve strategy and policymaking at all government levels and strengthen responsibility, accountability, and service delivery in a democratic environment. Many organizations, including the United Nations and critical agencies, agree that good governance is focused on high-quality consultation and stakeholder participation at all levels. Dialog and expanded participation can make informed decisions on issues affecting the International, Regional, and National Population and the participating markets and organizations, authorities, and services providers. To preserve social order – irrespective of the form of governance – the industrialized nations advance the notion of greater government accountability and citizen participation as a critical instrument (Management, 2010; Nations, 2013; UNDP, 2004). While the lack of technical infrastructure, financial capital, and public administration capacity has limited the efforts of e-Government in developing countries, innovations in programs and technology will help resolve many of these barriers. At the opening sitting, experts commented on the progress made in the growth of e-Government programs and services in each country to date. Besides offering greater transparency and facility, developing countries need to harness the tremendous potential – employment, trade, and services – that the ICT sector provides. While phased into and with pilot projects, the use of the ICT sector’s growth potential is critically connected with transforming government functions into e-government (Ebrahim & Irani, 2005; Griffin & Trevorrow, 2014; Management, 2010).
As many people have known, most government agencies have a low bureaucracy level. Long and arduous procedures have become barriers to people, whether personal or commercial, doing their legitimate business. This gives the public sector a negative light. In terms of bureaucratic convenience, Indonesia is, according to information published by the World Bank in 2012 as a member of the G20, number twelfth. This ranking is one of the lowest of our neighbors in the South East of Asia. In 2012-2013, Indonesia ranked 50th out of 144 countries according to the Global Growth Competitiveness Index. This is four ranks down from last year, where Indonesia is 46th out of 142 countries in the survey (Bashar et al., 2011; Cordella & Tempini, 2011; Turnip et al., 2018; Abadi et al., 2015; Welch & Pandey, 2008; Woro & Supriyanto, 2013).

It proved ineffectual in providing good services to people with its excessive reliance on the bureaucracy, hierarchy, rules, and regulations and when it appeared to be defined in the twenty-first century by the impact of globalization, which has the potential to shift the world social, cultural, economic and political arenas one way or the other. Most developing countries, including India, are now in the process of reinventing public service through the application of information and communication technologies, while many developed countries have already taken measures to improve interactions between their people and government (Bashar et al., 2011; Cordella & Tempini, 2011; Turnip et al., 2018; Welch & Pandey, 2008).

Based on a 2016 survey, Indonesia ranking 116 EGDI, ten ratings fell from 106 ratings in 2014. The United Nations released the EGDI (Government Development Index) range well below countries in South-East Asia, Malaysia, Philippines, and Brunei Darussalam. This certainly has given Indonesia the task of improving EGDI rankings for the coming years, where figures indicate the e-government application conditions for greater inclusiveness, performance, accountability, and transparency in public institutions (Multama et al., 2019; Solinhone & Rumyantseva, 2016).

Bureaucracy ought to have been functioning correctly in the systematization, facilitation, speed, support, and rationalization of governmental objectives. The phenomenon of Indonesia's bureaucratic incompetence, particularly at the regional and local level, has instead suggested inefficiency in public service. Another source of corruption that arises from 'lubrication' funds to speed up proper processing is a complicated bureaucratic procedure. According to the Transparency International Perception of Corruption Index, in 2011, Indonesia is 100th, along with 11 other countries with a mark 3.0 (0 as most corrupt and ten as low as a minimum) (Erhan et al., 2017; Mi’rojul & Yunas, 2016; Jaya, 2001; Pamoragung et al., 2006; Salsabila & Purnomo, 2018; Suhardi et al., 2015; Witsaryah et al., 2017). A semblance of public transparency and accountability must be implemented to improve the role of public oversight to repair the quality of bureaucratic performance in state institutions (Multama et al., 2019; Solinhone & Rumyantseva, 2016).

The advancement of advanced technology and ICT can become a tool to boost the government's efficiency. In government, e-government is called the use of new technologies and systems. E-government will become an integral part of the efforts of the government to boost bureaucratic efficiency. Via Presidential Instruction No. 3 of 2003, the Indonesian Government has plans to apply e-government. This e-government application will better address all government facets, not just Jakarta's Central Government, but local and provincial offices (Mi’rojul & Yunas, 2016; Jaya, 2001; Salsabila & Purnomo, 2018). Since e-government extends through IT facilities, the study's contribution is to provide an integrated e-government architecture system that aligns the IT infrastructure with public sector organizational business process administration. The explosive digital connectivity, the significant advances in communication and IT, and the intense worldwide rivalry revolutionize the way companies work and compete. The current literature highlights the high potential of ICT resources in private and public sector operational productivity, cost savings, service quality, convenience, creativity, and training (Bauo et al., 2016; Suhardi et al., 2015; Sulehat & Taib, 2016; Turnip et al., 2018; Woro & Supriyanto, 2013). The public sector has recently come to realize the potential value of ICT and e-business models to enhance the quality and responsiveness of services they offer to their people, increase the scope and accessibility of their services and public infrastructure and allow the public to access government services more efficiently and more transparently. Awareness and information have been the main economic competitiveness factor in the modern economy, underpinned by a revolutionary change in science and technology. For developed countries to benefit significantly from economic and social growth/development, they need to take a more active role in formulating national policies and strategies for promoting the knowledge economy. For this function, e-Government should play an important role. Find realistic options for ensuring successful citizen engagement in the information economy. Adopt a robust and systematic approach with a specific vision and plan to address obstacles to change (Basu, 2004; Mistry & Jalal, 2012; Turnip et al., 2018).

Many benefits can be gained through the use of online networks and integrated frameworks in e-government implementation. By using modern information and technology systems, e-government can handle government management's information needs to enhance administrative processes and ensure public accountability. Enduring decision-making processes, adequate, well-structured knowledge will also allow government agencies to perform their tasks efficiently and accurately (Ebrahim & Irani, 2005; Witsaryah et al., 2017). In the background of growing public demand for greater transparency and accountability of the public sector worldwide, including Indonesia. Centralization of public engagement authority and public participation barriers are an obstacle to both public and private openness and accountability (Justice et al., 2006; Sánchez-Torres & Miles, 2017; UNDP, 2004; Woro & Supriyanto, 2013). There has been a “government gap” between the country and other parts of the world to enhance social inclusion and demonstrate greater state transparency. "Generalization is difficult; the governance quality in MENA (the Middle East and Northern Africa), which corresponds to international empirical evidence, is growing with income. Seventy-two percent of respondents listed corruption in the public sector, which is the fourth largest problem. Despite government interventions, ambiguous structures, the duplication of managers’ roles, unclear management policies, and poor regulation have contributed to corruption and jobs in all
financial, human resources, and information management sectors. It is essential to ensure that interactions between government and independent media are not merely propaganda (Vilok et al., 2019). Setting up good governance and restoring public confidence alone needs more than accountability. Good governance brings respect for human rights, the rule of law, efficient human development engagement, and open and accountable structures and institutions. Service centers can be positioned closer to the consumer using new information and communication technology. These centers may consist of a government office kiosk unattended, service kiosks in the customer's vicinity, or the use of a home or office personal computer. The consequences of the digital divide that reflects those members of society that may or will not have access to the connected infrastructure must be addressed by society. It will play a significant role in driving changes in conventional industries that are lagging (Ciborra, 2005; Nurita, 2016; Suhardi et al., 2015; Wahyu et al., 2015).

In this study, the issue is how government agencies can use technology and information systems to build e-government and enhance public service quality. These inquiries seek to understand how using technology and information systems can enhance public service efficiency and quality in public institutions that establish e-government.

A critical approach to information and communication technology for E-government

A global change is taking place in information and communication technology. Governments around the world acknowledge the importance of e-government. E-government is described by the World Bank as the use of information technology agencies by government agencies that can transform ties with people, businesses, and other government arms. Their technology can serve a wide range of purposes: improved provision for public services, enhanced business-industry relations, empowerment for people through accessing knowledge, or successful government management. E-government is a type of e-government business that refers to the processes and frameworks required to provide electronic services to the public and collaborate with business partners (Ebrahim & Irani, 2005; Erhan et al., 2017; Mi’rojul & Yunas, 2016; Management, 2010; Sánchez-Torres & Miles, 2017; Woro & Supriyanto, 2013).

Electronic means "e-government is a process of using information and communications technologies to improve the efficiency, effectiveness, transparency, and accountability of government currently focus in Indonesia on the implementation of e-government. Efforts to Enhance Changes Progress in the introduction of e-government occurs in April 2004 when the government applied for all Indonesian citizenship, passports, driving licenses, and tax numbers with a single identification number (SIN). The evaluators are focused on the web presence, interaction, transaction, and transition, sustainability, e-Government willingness and transparency, investment value in every region, leadership, e-government institutionalization in these sectors, management process, the leadership performance of front offices, and the budget factor. The e-government in Indonesia is still in progress, as shown by the fact that only 9% of Indonesians benefit. Improving ICT technology, cyber-spatial legislation regulation, leadership, ICT human resources capability, and red-tapped work culture must be pursued to ensure better e-government implementation. The other example is the police facility and the renewal of the driving license or vehicle registration services across the Internet to get the police administrative apparatus to the car owners and drivers' group. Those involved do not have to think about the office to get services (Erhan et al., 2017; Mi’rojul & Yunas, 2016; M. Baeuo et al., 2016; Nurita, 2016; Witarasyah et al., 2017).

E-Government refers to distributing information and services to people or enterprises or other government departments by national or local government over the Internet or any other digital means. E-Government is a general word for local, state, and federal agency web-based services. Other sources describe e-government as follows: Description of the World Bank (AOEMA Report): E-government refers to the use of government IT agencies which can turn relationships between individuals, companies and other branches of government. These innovations can serve several purposes: enhanced government services delivery to people, better engagement with business and industry, empowering the citizen utilizing access to information, or better governance (Bashar et al., 2011; Mi’rojul & Yunas, 2016; Management, 2010; Nurita, 2016; Suhardi et al., 2015).

The electronic government is used to provide people and businesses with improved access to government information and operation, increase the services' quality, and give them more ability to engage in democratic institutions and procedures. It is using the most advanced technology of information and communication, such as web-based programs (Erhan et al., 2017; Thornton, 2014).

According to the UN, the government’s use of ICT and its implementation in providing information and public service to individuals is a concern for e-government. The use of government technology has become "normal": civil servants work much of their time on computers, computer support for all processes of government, public services are delivered over the Internet, social media messages are used with the public, and big data is the basis for new types of government action (Mutama et al., 2019; Suhardi et al., 2015; Thornton, 2014).

Government entities use the idea of e-government to provide services to people using information and communication technology (ICT). E-government readiness studies include statistics identifying the legal financial, physical, social, and technological infrastructure attributes needed of developed countries for full integration into society (Mi’rojul & Yunas, 2016; Mkude & Wimmer, 2013; Turnip et al., 2018).

In several countries around the world, e-government is becoming a shared priority of government efforts. The framework, values, community, and way of doing business have changed dramatically in society, using the potential of ICT as a tool for everyday life and through using the potential of the ICT system. ICT is one of the most significant aspects of our era. Any new invention changes
our lives to a certain degree. E-government is being increasingly implemented worldwide to minimize costs, improve service to the public, and enhance productivity and effectiveness at global, regional, and local levels. Of 192 United Nations representatives, 179 have stated that implementing e-government systems has been established, and e-government has been listed among the top priorities for governments worldwide (UN, 2008). E-government is far more than a mechanism for enhancing public services cost-effectiveness (Nations, 2013; Suhardi et al., 2015; Turnip et al., 2018)

Technology is also a method that adds value, uses, or manufactures an object/product. The product is thus not distinct from other existing goods and therefore incorporates itself into a system (Choi et al., 2018; Sánchez-Torres & Miles, 2017; Sulehat & Taib, 2016; Woro & Supriyanto, 2013). It is because of and causes physical, social, and economic problems that the Indonesian government. Indonesia must be able to maximize the technical ability to:

1. Providing equal opportunities and improving knowledge and public services needed to enhance people's social and economic conditions and extend their scope for its entire territory.

2. Increase opportunities for SMEs to grow their technical capabilities in order to enter broader markets.

3. Rising production, quality, and creativity in the productive sector and improving the distribution chain to boost global domestic competitiveness.

4. The framework of an efficient, clean, and populist government should be established at the national and provincial levels to improve public service efficiency and accountability and strengthen ties among government agencies.

Many factors, such as administrative support, consistent policies, competencies in IT, protection and privacy, IT infrastructures, and the confidence to use the services provided through e-government channels, affect e-government information systems' interoperability. To propose the architecture, this paper focuses on challenges to the information system's interoperability. It describes the drivers that will bring the e-government program to successful execution. High level e-government interoperability objectives: the sharpening of business processes to reach similar services could be accomplished through cooperation between governmental agencies (Sulehat & Taib, 2016).

In almost every institution, sector, and culture, Internet technology continues to gain prominence. Advanced IT including information hardware, software, data, text or other results generated in the form of advanced IT (AIT) programs, after information obtained from groups members, comprises the knowledge or rules on a mission; the results of activity in task data or procedures include facts and figures, views, folklore or practice relating to the work at hand (Choi et al., 2018; DeSanctis & Poole, 1994; Parente & Prescott, 1994; Welch & Pandey, 2008; Witarasyah et al., 2017).

E-government paradigm in Indonesia

In the wake of the 1998 reform movement in Indonesia, demand for better service than before was the Indonesian government's paradigm. Citizens should take part in state lives. The President of the Republic of Indonesia unveiled a roadmap to Indonesia 4.0, a national plan in the face of the Industrial Revolution 4.0, at the Indonesia Industrial Summit of 2019. Referring to Article 23(1) of the Act of the Republic of Indonesia No 25 of 2009 on PSS, it is stated that, "A national information system would be required for the provision of information support for the performance of public services,” while Article 23(4) of the PSN No 25 of 2009 states that PSS is a national information system." Reference to Article 23(1) Many local governments identify the introduction of the e-government as merely a website for the local government, so the e-government is not enforced until the four levels that need to be passed are matured. The government's commitment to improving e-government growth, particularly regarding its infrastructures, human resources, applications, regulations, and socialization in the government and the communities, is required to increase the development of e-government in Indonesia quality (Erhan et al., 2017; Farida et al., 2020; Mi’rojul & Novy Setia Yunas, 2016; Jaya, 2001; Suhardi et al., 2015; Syaifullah, 2015; Wahid, 2004).

Electronic government programs have been taken for more than ten years by governments worldwide and building information societies. Creating an e-government system with numerous challenges and limited resources calls for careful planning. The majority of funding in developing countries for developing e-government systems is donor-dependent.

E-government, administration, bureaucracy, and ICT, has been enriched by IT and improves the lives of many people. In every aspect of modern-day IT, it plays a key role. The government is a gift of information technology, which compares with ordinary governments focused on red-lace fear. Almost all of the developed world's Information and Communication Technologies (ICTs) are regarded as robust raw materials of e-government to enhance the quality of services offered to people or companies and rationalize the administrative device's internal organization. The application of IT, especially the internet, has made the distribution of information and communication quicker, more comfortable, and cheaper without any distance or time constraints. In different aspects of human life, the Internet is being introduced, including government sectors. The creation of a local government website is a concrete manifestation of the introduction of e-Government in Indonesia. In general, e-Government is a mechanism for using information technology to improve the government system's quality and efficiency (Alshehri & Drew, 2010; Multama et al., 2019; Pamoragung et al., 2006; Suhardi et al., 2015).
By using technology to promote public access to information, corruption can be minimized by increasing public institutions' openness and accountability. Public engagement can be increased by e-government, where the public can actively engage in government policy and decision-making. It is also anticipated that e-government will boost bureaucracy productivity and performance and increase economic growth. E-government can be divided into several levels through internet service delivery: information provision, one-way contact, two-way interaction, and full-electronic transaction services.

The Government's official website aims to publish all public records, including news and public services, and government in the Community. This website can be used to provide people with some details. The roles of the government's official website include:

- **Contact.** Communication. The website is built to connect with the public. In order to provide correct information, the contact must be 2-way capable.

- **Socialization.** Socialization. The website also needs to socialize the public policy of the government

- **Accommodation aspiration.** It should also be possible to make a public place of complaint and aspiration via the official government website.

Low-level information (profile region, borders, possible areas, tourism, and other areas) also exists on several local government websites. However, several websites do not offer investment opportunities in municipal facilities such as transport, housing, hospitals, and others for information or information purposes. However, many local websites also have search engines that are very useful for website visitors to the local government.

Nearly all Indonesian Local Government websites do not offer public services online and are still manually accessible except for some of the government's e-procurement sites (tender online auctions). Then almost all websites are unable to pay for public services online. The last thing is not all the local government websites that serve the general public with financial details (the local budget). These website forms are more transactional than information-oriented, the Indonesian government.

The website's features are restricted to transactional e-procurement or public interactive information. Complex and complex transaction interactions are not available as a feature, such as online payment systems. In general, the index of the divulgence of financial details is comparatively lower than the index website. This shows that public finances' openness and accountability in the Indonesian context need to be encouraged and enforced. The updated material is generally relatively late and was not up to date, one typical issue with the local authorities' use of the web.

The accessibility and wealth of features in public services on the Web are other issues. For four types of services, the local government's Indonesian website has not provided good service: FAQs, electronic procurement, site maps, and locale. There have also been several local councils at the public engagement level. Phase 4 is a business activity and group engagement.

The everyday use of the website by users represents another challenge. This can be calculated by commonly accessible traffic analysis software, such as alexa.com. Also, the popularity of websites of local governments correlated positively with wealth. This study's critical finding shows the digital divide between local governments and Java regions with non-Java regions. Regarding financial information and non-financial information, the local government has a higher index than provinces and districts. In contrast with the district or provincial governments, the city government has higher administrative and socioeconomic authority. It is not the individual below because of its role in organizing the local government.

The promotion of fiscal transparency and citizen engagement to achieve democratic accountability and responsiveness in the allocation and use of public money is widely promoted. In years before the First World War, the Bureau of Municipal Research (BMR) employs several novel formats to render budgetary principles and knowledge more widely accessible — both available and understandable to people, aimed at increasing fiscal accountability citizen engagement by attracting public opinion (Basu, 2004; Ciborra, 2005; Justice et al., 2006; Sánchez-Torres & Miles, 2017; Woro & Supriyanto, 2013).

One century later, e-government technology hopes to be an even better version of those exhibits and will be able to solve many of the technological obstacles to fiscal accountability and non-specialist public budgeting and finance involving conventional efforts.

**Conclusions**

In different countries worldwide, globalization has made its changes to the order of life. It might conclude that it is optimistic, as public life is outgrowing through the advancement of technology, information, and communication. On the other hand, technological growth, knowledge, and connectivity cause detrimental effects that can poison society's outlook to a less positive orientation through very rapid changes. Complexity and transparency, and accountability are a function of the global situation that progressively responsive manufacturers and service providers to reality's nuances. This research discusses how the implementation of e-government in Indonesia and its many problems were represented. It is a literary study.

The creation of local authorities' websites is one way for the government to deliver to the e-government. This website will provide the government with several incentives for its performances, cooperative partnerships, and the communities themselves. The website will be ordered as a way of networking, socializing, and aspiring. However, do not preclude the possibility of a more comprehensive feature, such as online transaction functions, contributing to creating the website.
Electronic government has been recognized as an international partnership strategy to provide citizens’ active interactions and involvement with creative, efficient, and high-quality public service to achieve green governance. The application of technology is expected to improve public service quality, transparency, and accountability for government agencies, especially information technology in government. With e-Government, the Government has indirectly changed the system’s functioning and enhanced internal management efficiency to improve the quality of public services.

This paper suggests that (i) The government’s need for more IT change in the workplace because technology can become an important tool to support government goals; (ii) Government websites should provide full coverage of each country’s contents, including different geographical conditions and availability of potential natural resources, before the government coordinates information activities; (iii) The government continues to create a demand for public services through the internet to encourage the public and shorten the public complaint’s bureaucratic phase; (iv) The public empowerment system should be evaluated by providing information through government websites, considering that the system’s sustainability will make efficient administration and management effective.

References


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